

NATURAL RESISTANCE



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Once there was a product so injurious to public health that it required special government legislation to deal with it. Government officials were convinced that fully informed consumers would make different choices, so they forced manufacturers to use unattractive packaging with restrictions on labels and colours that might entice buyers.

The product was margarine.

It all started in France in the late 1860s when the French government offered a prize for the development of a cheap butter substitute, and margarine was born. Butter was expensive—and remains so—and the rapidly urbanising population of the times couldn't afford butter and the French authorities worried that restricted access to dietary fat could undermine economic and military competitiveness with Germany.

Things were somewhat different in the US, where the dairy industry was getting organised. The advent of refrigerated transportation had massively increased the size and scope of the market for



easily perishable goods such as butter and milk. Just as the industry was organising itself, it faced competition from a similar and vastly cheaper substitute.

Tactics employed against margarine will be familiar to the modern reader—plain packaging laws, trade restrictions and public health ‘concerns’. There were also craven judiciaries making excuses for bad policy and upholding legislation on spurious grounds. Consumers, however, continued to buy margarine and voters voted against anti-margarine laws when given the opportunity in referenda.

Some important lessons can be learned from the margarine story. Voters are smarter than politicians, explaining why politicians don’t like referenda. Consumers know their self-interest better than bureaucrats. Public health ‘concerns’ are usually beat-ups. Government can and should stimulate innovation (if necessary) through prizes and awards rather than subsidies and tax breaks. And most importantly, innovation is not popular.

That is the key point in Calestous Juma’s new book *Innovation and its enemies: Why people resist new technologies*. A former teacher and journalist, the Kenyan born Juma is now a professor at Harvard’s Kennedy School of Government. His previous work has focussed on innovation and development in Africa. This latest book has broader appeal and should be read by everyone interested in innovation.

His basic thesis is fairly intuitive. It may well be true that there has never been a more exciting time to be an Australian, but innovation brings change and change leads to loss. The fear of loss undermines the case for innovation. To be clear, the benefits of innovation are massive and substantial. We live longer and fuller lives than ever before in human history. Innovation and technological growth has seen the average person experience a standard of living unparalleled in human history. But at the very heart of innovation policy is the term ‘creative destruction’, containing the word ‘creative’ (which must be a good thing) and ‘destruction’ (which doesn’t sound at all good).

These days we tend to associate innovation with technology— particularly information and communication technology. But as Juma makes very clear, the economist Joseph Schumpeter had a broader interpretation of innovation. Innovation could occur in any one of five areas: new products, new processes, new markets, new inputs or new organisation forms. It is now that the inherent controversy that surrounds innovation becomes clear. Junk bond financing that appeared in the 1980s was an innovation that led to new organisation forms appearing. Yet even now, some decades later, the events of the 1980s and the merits of junk bonds are still debated.

Changing processes is often associated with job loss and worse, opportunity loss. If manufacturing jobs are out-sourced to developing countries what jobs will there be for our kids? That is a tough a question to answer and I don’t know that Juma addresses it well, but that isn’t his purpose.

What he does do well is provide a series of case studies where there has been substantial opposition to innovation. Who would have thought that margarine would be a controversial



innovation? Or coffee—that well-known drink of the revolutionary. The humble coffee bean is transformed by a substantial series of related innovations into a delicious drink. Mind you, that didn't stop the authorities from banning the drink on 'public health' grounds. Juma has other examples— recorded music, printing the Koran, the introduction of tractors, electricity and so on.

There are common themes throughout all the examples. Whether an innovation will be resisted depends firstly on the value of the status quo. The higher the value, the greater the resistance to change. Then the distribution of winners and losers is important. The more concentrated the losers the greater the resistance. Finally, the role of intellectual authority is important – arguments for and against any innovation are waged by appeal to authority and scientific reasoning. All this, and more, is well articulated in Juma's overview chapter.

A particular strength of the book is Juma's focus on uncontroversial innovation (in modern terms), telling the stories of how those innovations were resisted. The exception is transgenic crops.

I would like Juma to have included some counter-examples, where innovations failed due to resistance. The difficulty, of course, is in identifying what those examples might be. A ban on human cloning is an obvious example. All up, however, this is a book well worth reading. It contains a lot of insight combined with interesting examples and fun facts.